



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

App. No.:	09/449,660	Art Unit:	2665
Appellants:	Wichelman et al.	Examiner:	Volper, Thomas
Filed:	Nov. 30, 1999		
Title:	MONITORING SYSTEM AND METHOD IMPLEMENTING TEST RESULT DISPLAY LOGIC	Confirm. No.:	6543
		Docket No.:	10001186-1

Mail Stop: Appeal Brief
Honorable Commissioner for Patents
Post Office Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 C.F.R. § 1.192

Sir:

In response to the Office Action mailed July 13, 2004 (Paper No. 13), this Appeal Brief is submitted to appeal the decision of Examiner Thomas E. Volper, Art Unit 2665, rejecting claims 1-3, 5-8, 10, 11, 13-16, 18, and 19 in the present application and making the rejection FINAL.

I. REAL PARTY IN INTEREST

The real party in interest of the instant application is Agilent Technologies, Inc., a Delaware corporation, having a principal place of business in Palo Alto, California.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

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III. STATUS OF THE CLAIMS

Claims 1-20 are pending in the application. The FINAL Office Action, mailed July 13, 2004, rejected claims 1-3, 5-8, 10, 11, 13-16, 18, and 19 and objected to claims 4, 9, 12, 17, and 20.

1) Claims 1, 2, 7, and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chappell* (U.S. Patent No. 6,425,132) in view of *Caporizzo* (U.S. Patent No. 5,874,992) and *Chen et al.* (U.S. Patent No. 6,032,019).

2) Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chappell* in view of *Caporizzo* and *Chen et al.* and further in view of *Schwartz* (U.S. Patent No. 5,883,882).

3) Claims 5, 6, 8, 10, 11, 14-16, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chappell* in view of *Caporizzo* and *Chen et al.* and further in view of *Hsu et al.* (U.S. Patent No. 6,483,814).

4) Claims 4, 9, 12, 17, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

IV. STATUS OF AMENDMENTS

No amendments have been submitted after the FINAL Office Action.

V. SUMMARY OF THE INVENTION

The present application is directed to monitoring systems and methods that implement display logic for displaying test results of a telecommunications system. The telecommunications system includes a plurality of channels, a plurality of nodes each of which is connected to a number of channels, and one or more groups of nodes. Test results can be

obtained on individual channels (channel level), on a node (node level), and on a group of nodes (group level) using a spectrum analyzer. In association with the spectrum analyzer 12 (Figs. 1A-1C) is a computer 22 and related graphical user interface (GUI) software 32, which displays the test results in a user controlled format.

Figs. 11A-11K illustrate examples of display screens generated by the GUI software 32 for displaying the telecommunication test results. Using the display level selection box 369, the user is able to select whether the GUI software 32 displays the test results on a group level, node level, or channel level. Figs. 11A-11C illustrate possible displays for showing characteristics of a group of nodes when the group level button is selected. Figs. 11D-11F illustrate possible displays for showing characteristics of a node when the node level button is selected. And Figs. 11G-11K illustrate possible displays for showing characteristics of a channel when the channel level button is selected.

VI. CONCISE STATEMENT OF THE ISSUES PRESENTED FOR REVIEW

- 1) The first issue in this appeal is whether or not claims 1, 2, 7, and 13 are patentable over *Chappell* (U.S. Patent No. 6,425,132) in view of *Caporizzo* (U.S. Patent No. 5,874,992) and *Chen et al.* (U.S. Patent No. 6,032,019) under 35 U.S.C. § 103(a).
- 2) The second issue in this appeal is whether or not claim 3 is patentable over *Chappell* in view of *Caporizzo* and *Chen et al.* and further in view of *Schwartz* (U.S. Patent No. 5,883,882) under 35 U.S.C. § 103(a).
- 3) The third issue in this appeal is whether or not claims 5, 6, 8, 10, 11, 14-16, 18, and 19 are patentable over *Chappell* in view of *Caporizzo* and *Chen et al.* and further in view of *Hsu et al.* (U.S. Patent No. 6,483,814) under 35 U.S.C. § 103(a).

VII. GROUPING OF THE CLAIMS

The claims are divided into two (2) claim groupings, as set out below:

- I. Claim Group I -- claims 1-12
- II. Claim Group II -- claims 13-20

For purposes of the arguments set forth in this Appeal Brief, only one claim from each group will be evaluated and discussed with respect to the prior art.

Reasons that Claim Groups Do Not Stand or Fall Together

Although, in reality, all claims of an application are distinct, Appellants have grouped the claims of the present application into two (2) distinct claim groups. The reason that the claims of any given group do not stand or fall with the claims of another group is, ultimately, because they are of differing scope, as specifically set out below.

In Claim Group I, the claim set is directed to an interface system for monitoring a number of channels in a communications system. The interface system comprises a processor, a memory, a display device, and test result interface logic. The test result interface logic includes group level display logic, node level display logic, channel level display logic, and logic to enable a user to select among the three levels of test result components for display on the display device.

In Claim Group II, the claim set is directed to a method for monitoring a number of channels in a communications system. The method comprises generating a number of group level test result components on a display device, generating a number of node level test result components on the display device, generating a number of channel level test result components on the display device, and enabling a user to select among the three levels of test result components. The method can be carried out without necessarily relying upon the structure specified in Claim Group I.

VIII. ARGUMENTS

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A. References Relied Upon to Support 35 U.S.C. § 103 Rejections

1. Chappell

Chappell discloses a testing device for testing ingress of a selected node. Fig. 1 illustrates the overall system of a CATV system, which, in addition to conventional elements, includes a testing services headend 26 and one or more field clients 50. A technician connects a field client 50 to a node in order that this node can be tested for ingress. The field client 50 sends a node identifier N_ID upstream to the testing services headend 26 along with a reverse telemetry message. When the testing services headend 26 receives N_ID identifying the specific node to be tested, the testing services headend 26 performs spectral analysis on the upstream signals. The test results for the identified node are forwarded to the field client 50 on that node and the test results are displayed on the field client 50 for the technician's viewing.

Fig. 2 illustrates the details of the testing services headend 26, which includes a combiner 62, a test point switch 64, and an ingress modem 60. The combiner 62 provides a composite signal 63_{N+1} that is a combination of any signals that might be present on the nodes. This composite signal is passed through the test point switch 64 to the ingress modem 60 until a node identifier N_ID is received from one of the nodes. The N_ID signal is sent from the ingress modem 60 to the test point switch 64 via communication link 66. In

response to receiving N_ID, the test point switch 64 switches one of the input 63₁, 63₂, ..., 63_N, corresponding to the identified node, for connection with its output 67. In this way, the reverse telemetry message from the identified node is sent to the ingress modem 60 for spectrum analysis.

2. Caporizzo

Caporizzo discloses a device for analyzing bit path errors in a cable television transmission network having a tree-and-branch structure connecting a headend 15 to a plurality of subscriber systems. Return messages from the subscriber systems can be sent to the headend 15 by the subscriber settop terminal 10. The settop terminals detect the bit errors and store them. When the bit error rate exceeds a predetermined threshold, the settop terminal 10 generates a warning signal for transmission to the headend 15, which diagnoses the problem. The headend 15 utilizes the results from a group of households that have the same problem in order to isolate the source of a failure.

3. Chen et al.

Chen et al. discloses a device used for locating ingress noise gaps for an upstream data carrier in a cable network. A packet generator sends test data packets downstream in a cable modem termination system. An echo device, which may be located inside or outside the cable modem termination system, listens on the downstream path for the test data packets. Once received, the echo device changes the address of the test data to the address of a packet checker. The packet checker receives and analyzes the test data packet to assess the amount of noise on that particular test frequency.

4. Schwartz

Schwartz discloses a device for detecting faults in a frequency duplexed communication system. A test frequency band located between uplink and downlink frequency bands in the frequency duplexed system is used to isolate block-level faults. Test signals in the test frequency band are fed into a downlink path of a branch of the communication system. When the test signals encounter a remote station having duplexing means, the test signals leak through the duplexing means into an uplink path of the remote station. The amount of attenuation of signal leakage indicates the operability status of the components therein. By monitoring the power level of the test signals in the uplink and downlink paths, faults can be isolated.

5. Hsu et al.

Hsu et al. discloses a device for determining the nature of a wireless environment in use. The device selects appropriate frequency channels for data transmissions that are more likely to accommodate sustained data transmission at high speeds.

B. Discussion of Claim Group I

Claim 1 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Chappell* in view of *Caporizzo* and *Chen et al.* Appellants respectfully submit that the rejection under § 103 should be overturned for any one of the following reasons, each of which are separately discussed below:

1. the FINAL Office Action fails to establish a prima facie case of obviousness because the combined teachings of *Chappell*, *Caporizzo*, and *Chen et al.* do not teach or suggest each and every element of the claim;

2. even assuming, *arguendo*, that the prior art teaches each and every element of the claim, the FINAL Office Action fails to establish a *prima facie* case of obviousness because the prior art does not provide a proper suggestion or motivation to modify *Chappell* or to combine reference teachings;
3. modifying the *Chappell* reference as suggested in the FINAL Office Action would not provide any apparent benefits in the *Chappell* environment;
4. the Examiner has misconstrued the prior art references; and
5. the FINAL Office Action relies upon impermissible hindsight of Appellants' disclosure.

1. Failure to Establish *Prima facie* Case of Obviousness:

Combination Fails to Teach Each and Every Elements of Claim

a. Case Law Precedent for Teaching All Claim Elements

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art."

b. Prior Art Fails to Teach All Claim Elements

Independent claim 1 is directed to an interface system comprising a processor, a memory, a display device, and *test result interface logic*. The test result interface logic includes "*group level display logic*," "*node level display logic*," and "*channel level display logic*." These different logic elements generate test results on the group level, node level, and channel level, respectively, such that the test results can be displayed on a single display device. The prior art fails to teach all three of the group level display logic, node level

display logic, and channel level display logic in one embodiment. Also, the prior art fails to provide that these three logic elements can generate the three levels of signals on the same display device.

Claim 1 also recites that the test result interface logic further includes “*logic to enable a user to select among the group level test result components, node level test result components, and channel level test result components for display on the display device.*”

The prior art references, taken alone or in combination, fail to teach this claimed feature enabling a user to select among the different levels.

2. Failure to Establish *Prima facie* Case of Obviousness:

No Suggestion or Motivation to Combine or Modify References

a. Case Law Precedent Concerning Combining/Modifying

“The PTO has the burden under § 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

“Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under § 103, teachings of references can be combined only if there is some suggestion or incentive to do so.” *ACS Hospital Systems, Inc., v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

“The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination.” *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

“Modification unwarranted by the disclosure of a reference is improper.” *Carl Schenck, A.G. v. Nortron Corp.*, 713 F.2d 782, 218 U.S.P.Q. 698, 702 (Fed. Cir. 1983).

“The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.” *In re Fritch*, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

b. No Proper Combination/Modification

Independent claim 1 is directed to an interface system for monitoring a number of channels in a communications system having at least one group of a number of nodes, each node having a number of channels. The interface system comprises a processor, a memory, a display device, and *test result interface logic*, which, for example, may correspond to the GUI software for displaying test results. The test result interface logic includes “**group level display logic**,” “**node level display logic**,” and “**channel level display logic**.” These different logic elements generate test results on the group level, node level, and channel level. These test results can all be displayed on a single display device. Although *Chappell* appears to display results of a node level test, the prior art fails to suggest altering the device of *Chappell* to allow the display on the field client 50 to display the three levels of tests as claimed. Furthermore, the prior art does not suggest combining references that would allow *Chappell*’s display to display the three levels, nor does the prior art suggest any motivation for such a combination. Instead, the prior art appears to measure on one level only and never makes the leap across the technological gap to display on the three levels as claimed.

Claim 1 also recites that the test result interface logic further includes “**logic to enable a user to select among the group level test result components, node level test result components, and channel level test result components for display on the display device.**”

The prior art fails to provide motivation to alter the *Chappell* reference in a manner to enable selection of the various display levels, as claimed. Particularly, since the references are concerned only with operating on one level, there would be no need or reason to even consider such a selection. In this regard, the prior art fails to provide motivation for such a modification. None of the references alone or in combination provide an impetus necessary to cause one of ordinary skill in the art to combine the teachings of the references in the way the FINAL Office Action has suggested.

3. No Apparent Benefits of Modifying Primary Reference

a. Case Law Precedent Concerning Motivation

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

A §103 rejection based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, is not proper and the *prima facie* case of obviousness cannot be properly made. In short, there would be no technological motivation for engaging in the modification or change. To the contrary, there would be a disincentive. If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

b. No Proper Motivation to Combine/Modify

The FINAL Office Action seems to suggest that it would be obvious to modify *Chappell* to display on the three different levels. As mentioned above, the prior art does not

suggest such a modification. In addition, it seems apparent that there would be no benefits to such a modification since it would alter the original intent of *Chappell*. There would be no motivation to alter *Chappell* in the manner suggested in the FINAL Office Action since the technician at the respective node would not have any particular need or desire to see, or to select to see, test results on a group level since the technician in the *Chappell* patent is only testing for ingress on the one node. It would be counterproductive to provide the technician with this unnecessary information, which would only serve to complicate the ingress testing at the node and confuse the technician.

4. Examiner's Misconstruction of Prior Art

The FINAL Office Action states that *Chappell* discloses that node level test results may be measured by a field client and sent to the headend. This statement is incorrect. *Chappell* actually discloses that the headend receives a reverse path signal from the field client and measures the frequency response of the signal. Then the test results are sent to the field client. See col. 5, lines 28-36.

The FINAL Office Action also states that *Chappell* discloses a signal comprised of multiple node level test results, composite signal 63_{N+1}. This statement is incorrect. First, as mentioned above, the field client does not provide test results to the headend. Second, the composite signal is not the sum of all signals on all nodes, but only a signal representing the reverse path signals from some of the nodes that might be providing those signals at any particular time. Furthermore, the composite signal is only used so as to detect when one of the nodes sends a node identifier N_ID to initiate the ingress testing of the identified node. See col. 5, lines 8-16.

The FINAL Office Action also states that *Chappell* clearly shows the capability to perform analysis on any of the inputs of the test point switch 64 at the headend. Appellants

disagree with this statement. *Chappell* does not teach or suggest that “any” input is analyzed, but only the inputs connected to the nodes. The composite signal itself is not analyzed nor is it ever meant to be. However, even if the composite signal were passed onto the ingress modem 60 for analysis, the composite signal would not be a useful signal to which analysis could be done. Instead, it would be an unsynchronized accumulation of randomly selected signals from any number of nodes that might be sending requests for advanced services (see element 24) or N_ID signals. Of course, any spectrum analysis on such a signal would not provide any useful test results.

The FINAL Office Action states that there is sufficient disclosure to suggest that a combination of node level test results, i.e., group level test results, may be sent to the headend to be analyzed. Appellants disagree with this statement since *Chappell* does not provide any suggestion in this regard, but only teaches testing one node at a time. The Examiner has not provided any evidence from the disclosures of the prior art references to support his statements. Receiving the node identifier N_ID, the headend only analyzes one node at a time. *Chappell* is silent concerning any modifications from this intended use. The other references are silent in this regard as well. Also, it should be observed that *Chappell* lacks any necessary circuitry for accomplishing a group level test, since such a system would require additional circuitry that does not exist in the prior art. For example, it would require that *Chappell* would include a plurality of synchronized field clients on each node of the group, which of course would be very inefficient and difficult to implement.

The FINAL Office Action also states that the *Chappell* reference does not have to be altered to provide test results on different levels since this capability is already demonstrated in Fig. 2 and that it is also obvious to add an additional level of testing, i.e., channel level testing, to the invention of *Chappell*. Again, Appellants disagree. The capability of testing on different levels is not taught or suggested by *Chappell*, or any combination of the cited

references, but only testing on one level, as mentioned above. Secondly, adding an additional level of testing is not taught or suggested in *Chappell*, or any combination of the cited references. Again, the Examiner does not provide evidence from the prior art to support these statements. Lacking evidence in the prior art of such a suggestion, the FINAL Office Action relies on impermissible hindsight of the present application to reconstruct Appellants' invention, as discussed in more detail below.

5. Hindsight

a. Case Law Precedent Concerning Hindsight

To draw on hindsight knowledge of the claimed invention, when the prior art does not disclose or suggest that knowledge, is an approach using the invention as a template for its own reconstruction, which would be “an illogical and inappropriate process by which to determine patentability.” *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996).

An evaluation of the obviousness or non-obviousness of claims must not be made with the benefit of hindsight using the present application as a blueprint to reconstruct the claimed invention from the references. The invention must be viewed not after the blueprint has been drawn by the inventor, but as it would have been perceived in the state of the art that existed at the time the invention was made. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

Absent such a showing in the prior art, the Examiner has impermissibly used “hindsight” occasioned by the Applicant’s teaching to hunt through the prior art for the claimed elements and combine them as claimed. *In re Zurko*, 111 F.3d 887, 42 USPQ2d 1476 (Fed. Cir. 1997).

b. Examiner Relies on Impermissible Hindsight

Appellants assert that the rationale used in the FINAL Office Action for combining and/or modifying reference teachings is nowhere to be found in the prior art and only exists in the disclosure of the present application. The Examiner merely suggests that it would have been obvious to one of ordinary skill in the art to do what the Appellants have done, but no evidence in the prior art is provided for such a claim. Instead, it seems as though the Examiner is merely repeating back what the Appellants have invented and magically pulls motivation out of thin air without any supporting evidence in the prior art. Also, it should be pointed out that the Examiner creatively manipulates the prior art to reject the claims when the prior art does not lead one of ordinary skill in the art down the path that the Examiner has suggested. Without any proof that the prior art is directing one of ordinary skill in the art in such a way, it is clear that the Examiner has resorted to hindsight of Appellants' own disclosure to reconstruct the present invention.

Accordingly, for any one of the above reasons, Appellants believe that claim 1 is allowable over the cited combination of references. Also, Appellants assert that the *Schwartz* and *Hsu et al.* references do not overcome the deficiencies of the prior art as mentioned above. Therefore, Appellants respectfully request that the Board overturn the 35 U.S.C. § 103 rejection of claim 1.

C. Discussion of Claim Group II

Claim 13 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Chappell* in view of *Caporizzo* and *Chen et al.* Appellants respectfully submit that the rejection

under § 103 should be overturned for any one of the following reasons, each of which are separately discussed below:

1. the FINAL Office Action fails to establish a *prima facie* case of obviousness because the combined teachings of *Chappell*, *Caporizzo*, and *Chen et al.* do not teach or suggest each and every element of the claim;
2. even assuming, *arguendo*, that the prior art teaches each and every element of the claim, the FINAL Office Action fails to establish a *prima facie* case of obviousness because the prior art does not provide a proper suggestion or motivation to modify *Chappell* or to combine reference teachings;
3. modifying the *Chappell* reference as suggested in the FINAL Office Action would not provide any apparent benefits in the *Chappell* environment;
4. the Examiner has misconstrued the prior art references; and
5. the FINAL Office Action relies upon impermissible hindsight to reject claim

1.

1. Failure to Establish *Prima facie* Case of Obviousness:

Combination Fails to Teach Each and Every Elements of Claim

Independent claim 13 is directed to a method comprising generating a number of “*group level test result components*,” “*node level test result components*,” and “*channel level test result components*.” These different sets of test result components on the group level, node level, and channel level are such that the test results can be displayed on a single display device. The prior art fails to teach all three of the group level, node level, and channel level test results components displayed on the same display device.

Claim 13 also recites that the method includes “*enabling a user to select among the group level test result components, node level test result components, and channel level test*

result components for display on the display device.” The prior art references, taken alone or in combination, fail to teach this claimed feature for enabling a user to select among the different levels.

2. Failure to Establish *Prima facie* Case of Obviousness:

No Suggestion or Motivation to Combine or Modify References

Independent claim 13 is directed to a method for monitoring a number of channels in a communications system having at least one group of a number of nodes, each node having a number of channels. The method comprises “*generating a number of group level test result components on a display device,*” “*generating a number of node level test result components on the display device,*” and “*generating a number of channel level test result components on the display device.*” The prior art fails to suggest altering the device of *Chappell* to allow the display on the field client 50 to display these three levels. Although it appears that *Chappell* displays results on a node level, the prior art fails to modify *Chappell* to generate test result components from the three different levels as claimed. Furthermore, the prior art does not suggest combining references that would allow *Chappell’s* display to display the three levels, nor does the prior art suggest any motivation for such a combination.

Claim 13 also recites that the method further includes “*enabling a user to select among the group level test result components, node level test result components, and channel level test result components for display on the display device.*” The prior art combination fails to provide motivation to alter the *Chappell* reference in a manner to enable selection of the various display levels, as claimed. Particularly, since the references merely teach operating on one level only, there would be no need or reason to even consider such a selection. Therefore, the prior art fails to provide motivation for such a modification. None of the references alone or in combination provide impetus necessary to cause one of ordinary

skill in the art to combine the teachings of the references in the way the FINAL Office Action has suggested.

3. No Apparent Benefits of Modifying Primary Reference

The FINAL Office Action seems to suggest that it would be obvious to modify *Chappell* to display on the three different levels. As mentioned above, the prior art does not suggest such a modification. In addition, it seems apparent that there would be no benefits to such a modification since it would alter the original intent of *Chappell*. There would be no motivation to alter *Chappell* in the manner suggested in the FINAL Office Action since the technician at the respective node would not have any particular need to see, or to select, test results on a group level since the technician in the *Chappell* patent is only testing for ingress on the one node. It would be counterproductive to provide the technician with unnecessary information, which would only serve to complicate the ingress testing at the one node or confuse the technician.

4. Examiner's Misconstruction of Prior Art

The FINAL Office Action states that *Chappell* discloses that node level test results may be measured by a field client and sent to the headend. This statement is incorrect. *Chappell* actually discloses that the headend receives a reverse path signal from the field client and measures the frequency response of the signal. Then the test results are sent to the field client. See col. 5, lines 28-36.

The FINAL Office Action also states that *Chappell* discloses a signal comprised of multiple node level test results, i.e., composite signal 63_{N+1} . Appellants contend that this statement is incorrect. First, as mentioned above, the field client does not provide test results to the headend. Second, the composite signal is not the sum of all signals on all nodes, but

only a signal representing the reverse path signals from some of the nodes that might be providing those signals at any particular time. Furthermore, the composite signal is only used so as to detect when one of the nodes sends a node identifier N_ID to initiate ingress testing. See col. 5, lines 8-16.

The FINAL Office Action also states that *Chappell* clearly shows the capability to perform analysis on any of the inputs of the test point switch 64 at the headend. Appellants disagree with this statement. *Chappell* does not teach or suggest that “any” input is analyzed, but only the inputs connected to the nodes. The composite signal itself is not analyzed nor is it ever meant to be. It seems as if the Examiner conveniently added this function for the sole purpose of rejecting the claim, without understanding the actual operation of Fig. 2. However, even if the composite signal were passed onto the ingress modem 60 for analysis, the composite signal would not be a useful signal to which analysis could be done. Instead, it would be an unsynchronized accumulation of randomly selected signals from any number of nodes that might be sending requests for advanced services (see element 24) or N_ID signals. Of course, any spectrum analysis on such a signal would not provide any useful test results.

The FINAL Office Action states that there is sufficient disclosure to suggest that a combination of node level test results, i.e. group level test results, may be sent to the headend to be analyzed. Appellants disagree with this statement since *Chappell* does not provide any suggestion in this regard, but only teaches testing one node at a time. Upon receiving the node identifier N_ID, the headend only analyzes one node at a time. *Chappell* is silent concerning any modifications from this intended use. The other references are silent in this regard as well. Also, it should be observed that *Chappell* lacks any necessary circuitry for accomplishing a group level test, since such a system would require a plurality of synchronized field clients on each node of the group, which would be very inefficient and difficult to implement.

The FINAL Office Action also states that the *Chappell* reference does not have to be altered to provide test results on different levels since this capability is already demonstrated in Fig. 2 and that it is also obvious to add an additional level of testing, i.e., channel level testing, to the invention of *Chappell*. Appellants disagree. The capability of testing on different levels is not taught or suggested by *Chappell*, or any combination of the cited references, but only testing on one level, as mentioned above. Secondly, adding an additional level of testing is not taught or suggested in *Chappell*, or any combination of the cited references. The Examiner again fails to provide evidence in the prior art to support his statement. If a suggestion or motivation to modify or combine references exists, it should be pointed out where it can be found in the prior art. However, lacking evidence of such a suggestion, the FINAL Office Action resorts to relying on impermissible hindsight of Appellants' invention to reconstruct the invention according to the teachings of the present application to reconstruct Appellants' invention.

5. Hindsight

Appellants assert that the rationale used in the FINAL Office Action for combining and/or modifying reference teachings is nowhere to be found in the prior art and only exists in the disclosure of the present application. The Examiner merely suggests that it would have been obvious to one of ordinary skill in the art to do what the Appellants have done, but no evidence in the prior art is provided for such a claim. Instead, it seems as though the Examiner is merely repeating back what the Appellants have invented and magically pulls motivation out of thin air without any supporting evidence in the prior art. Also, it should be pointed out that the Examiner creatively manipulates the prior art to reject the claims when the prior art does not lead one of ordinary skill in the art down the path that the Examiner is suggesting. Without any proof that the prior art is directing one of ordinary skill in the art in

such a way, it is clear that the Examiner has resorted to hindsight of Appellants' disclosure to reconstruct the present invention.

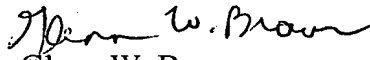
Accordingly, for any one of the above reasons, Appellants believe that claim 1 is allowable over the cited combination of references. Appellants also believe that *Schwartz* and *Hsu et al.* do not provide any teachings to overcome the deficiencies of *Chappell*, *Caporizzo*, and *Chen et al.* Therefore, Appellants respectfully request that the Board overturn the 35 U.S.C. § 103 rejection of claim 13.

IX. CONCLUSION

Based upon the foregoing discussion, Appellants respectfully assert that the Examiner's final rejection of claims 1-3, 5-8, 10, 11, 13-16, 18, and 19 is improper. Appellants respectfully request that the rejection be overruled and withdrawn by the Board, and that the application be allowed to issue as a patent with all pending claims.

Please charge Agilent's deposit account 50-1078 in the amount of \$340 for the filing of this Appeal Brief. No additional fees are believed to be due in connection with this Appeal Brief. If, however, any additional fees are deemed to be payable, you are hereby authorized to charge any such fees to deposit account No. 50-1078.

Respectfully submitted,


Glenn W. Brown
Reg. No. 51,310
(770) 933-9500

X. APPENDIX

Claims:

1. An interface system for monitoring a number of channels in a communications system having at least one group of a number of nodes, each node having a number of channels, the interface system comprising:

a processor electrically coupled to a local interface;

a memory electrically coupled to the local interface;

a display device electrically coupled to the local interface; and

test result interface logic stored on the memory and executable by the processor, the test result interface logic including:

group level display logic to generate a number of group level test result components on the display device that include a number of group parameters associated with the at least one group;

node level display logic to generate a number of node level test result components on the display device that include a number of node parameters associated with one of the nodes;

channel level display logic to generate a number of channel level test result components on the display device that include a number of channel parameters associated with a channel on one of the nodes; and

logic to enable a user to select among the group level test result components, node level test result components, and channel level test result components for display on the display device.

2. The system of claim 1, wherein the group level test result components further comprise a node information table listing a number of the nodes associated with the at least one group.
3. The system of claim 1; wherein the group level test result components further comprise a group total node power graph indicating a power range for a number of the nodes associated with the at least one group.
4. The system of claim 1, wherein the group level test result components further comprise an average percent availability graph indicating a low percent availability, a high percent availability, and an average percent availability for a number of the nodes associated with the at least one group.
5. The system of claim 1, wherein the node level test result components further comprise a channel plan graph that indicates a desired frequency spectrum of a respective one of the nodes, the desired frequency spectrum including at least one frequency band associated with at least one of the channels that are associated with the respective node.
6. The system of claim 1, wherein the node level test result components further comprise a total node power graph indicating an amount of power associated with one of the nodes with respect to time.
7. The system of claim 1, wherein the node level test result components further comprise a node spectrum scan indicating an actual frequency spectrum of one of the nodes with respect to time.

8. The system of claim 1, wherein the channel level test result components further comprise a channel carrier-to-noise graph indicating a magnitude of a channel carrier-to-noise ratio of the channels associated with one of the nodes with respect to time.

9. The system of claim 1, wherein the channel level test result components further comprise channel percent available graph indicating a percent availability of the channels associated with one of the nodes with respect to time.

10. The system of claim 1, wherein the channel level test result components further comprise a channel average noise power graph indicating a magnitude of a channel noise power of the channels associated with one of the nodes with respect to time.

11. The system of claim 1, wherein the channel level test result components further comprise a channel power graph indicating a magnitude of a channel noise power of one of the channels associated with one of the nodes with respect to time.

12. The system of claim 1, wherein the channel level test result components further comprise a channel burst counter graph indicating a number of channel bursts occurring in the channels associated with one of the nodes with respect to a burst duration length.

13. An interface method for monitoring a number of channels in a communications system having at least one group of a number of nodes, each node having a number of channels, the interface method comprising the steps of:

generating a number of group level test result components on a display device that include a number of group parameters associated with the at least one group;

generating a number of node level test result components on the display device that include a number of node parameters associated with one of the nodes;

generating a number of channel level test result components on the display device that include a number of channel parameters associated with a channel on one of the nodes; and

enabling a user to select among the group level test result components, node level test result components, and channel level test result components for display on the display device.

14. The method of claim 13, wherein the step of generating a number of node level test result components on the display device that include a number of node parameters associated with one of the nodes further comprises the step of generating a channel plan graph that indicates a desired frequency spectrum of a respective one of the nodes, the desired frequency spectrum including at least one frequency band associated with at least one of the channels that are associated with the respective node.

15. The method of claim 13, wherein the step of generating a number of node level test result components on the display device that include a number of node parameters associated with one of the nodes further comprises the step of generating a total node power graph indicating an amount of power associated with one of the nodes with respect to time.

16. The method of claim 13, wherein the step of generating a number of channel level test result components on the display device that include a number of channel parameters associated with one of the nodes further comprises the step of generating a channel carrier-to-noise graph indicating a magnitude of a channel carrier-to-noise ratio of the channels associated with one of the nodes with respect to time.

17. The method of claim 13, wherein the step of generating a number of channel level test result components on the display device that include a number of channel parameters associated with one of the nodes further comprises the step of generating a channel percent available graph indicating a percent availability of the channels associated with one of the nodes with respect to time.

18. The method of claim 13, wherein the step of generating a number of channel level test result components on the display device that include a number of channel parameters associated with one of the nodes further comprises the step of generating a channel average noise power graph indicating a magnitude of a channel noise power of the channels associated with one of the nodes with respect to time.

19. The method of claim 13, wherein the step of generating a number of channel level test result components on the display device that include a number of channel parameters associated with one of the nodes further comprises the step of generating a channel power graph indicating a magnitude of a channel noise power of one of the channels associated with one of the nodes with respect to time.

20. The method of claim 13, wherein the step of generating a number of channel level test result components on the display device that include a number of channel parameters associated with one of the nodes further comprises the step of generating a channel burst counter graph indicating a number of channel bursts occurring in the channels associated with one of the nodes with respect to a burst duration length.